

Pending

Active

- EAST**
- L1: (50593) phenolic adj resin
  - L2: (1027) 521/174
  - L4: (795) novolak adj 11
  - L5: (4497) novolak same 11
  - L6: (0) 13 and 15
  - L7: (1) 13 and novolak
  - L3: (20) 11 and 12
  - L8: (2196) 15.ab.
  - L9: (25943) "521".clas.
  - L10: (12) 18 and 19
  - L11: (120480) inoue.in.
  - L12: (28) 15 and 111
  - L13: (20771) 11.ab.
  - L14: (20929) "11.ab.19" and 1 13
  - L15: (250) 19 and 113
  - L16: (3) 12 and 113
  - L17: (101655) polyurethane and (foam or foamed)
  - L18: (94) 15 and 117
  - L19: (20) 11 and 12**
  - L20: (2) ("5756642").PN.
  - L21: (1197546) mw or (molecular adj weight)
  - L22: (2) 120 and 121
  - L23: (351106) mp or melting adj point
  - L24: (1) 120 and 123
  - L25: (1663) phenolic adj polymer
  - L26: (0) 125 and 12
  - L28: (0) 19 and 127
  - L29: (1) 117 and 127
  - L27: (163) novolak same 125

Failed

(11) According to the invention, there is provided a method of producing an open cell rigid polyurethane foam which comprises reacting a polymethylene polyphenylisocyanate prepolymer with a polyol at an NCO/OH equivalent ratio of 1.3 to 3.0 by use of a blowing agent substantially comprising water in the presence of a catalyst, a foam stabilizer and a cell opening agent.

(12) The polyol includes a polyether polyol which has a functionality of 2-8 and a hydroxyl value of 300-600 mg KOH/g and which is used in the production of conventional rigid polyurethane foam, and a polyester polyol which has a functionality of 2-4 and a hydroxyl value of 250-500 mg KOH/g and which is used in the production of conventional rigid polyurethane foam. There may also be used a phenolic resin which has reactive methylois. Among these polyols is preferred a polyether polyol having a hydroxyl value of 300-600 mg KOH/g which is obtained as an addition product of ethylene oxide or propylene oxide or both to a compound containing hydroxyl groups such as trimethylol propane or sorbitol, or a polyamino compound such as o-tolylene diamine or m-tolylene diamine.

(13) The polymethylene polyphenylisocyanate prepolymer used in the invention is obtained by the reaction of a polymethylene polyphenylisocyanate (hereinafter, somewhere, referred to as pMDI) of the formula ##STR1## wherein n is an integer of 0-6, which is commercially available, with a compound containing hydroxyl groups therein, and has an amine equivalent preferably of 140-200 mg KOH/g. There may be used as the compound containing hydroxyl groups therein, for example, a monoalcohol or phenolic compound having a functionality of one and a molecular weight of 32-300, or a polyol having a functionality of two to three and a molecular weight of 62-600. Accordingly, the compound containing hydroxyl groups therein used may be exemplified by a monoalcohol such as methanol, ethanol, n-butanol, ethylene glycol monomethyl ether or diethylene glycol monomethyl ether; a diol such as bisphenol A, o-, m- or p-cresol, ethylene glycol, diethylene glycol, propylene glycol, 1,4-butanediol or 1,6-hexanediol; a triol such as glycerine, trimethylol propane; other polyfunctional alcohols such as methyl glucoside, sucrose, sorbitol or dulcitol.

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|    | U                        | Document ID  | Issue Date | Pages | Title   | Current OR | Current XRef         | Retrieval C | Inventor                     | S                                   | C                        | P                        |                          |
|----|--------------------------|--------------|------------|-------|---|------------|----------------------|-------------|------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 11 | <input type="checkbox"/> | US 5621043 A | 19970415   | 13    | Elastomeric sealants                                    | 525/111    | 524/710;<br>524/764; |             | Croft; Thomas S.             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12 | <input type="checkbox"/> | US 5575871 A | 19961119   | 7     | Heat insulating material and method for producing same  | 156/78     | 156/213;<br>156/214; |             | Ryoshi; Hiroto et al.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13 | <input type="checkbox"/> | US 5457138 A | 19951010   | 5     | Method for producing open cell rigid polyurethane foam  | 521/125    | 521/124;<br>521/137; |             | Yuge; Kiyohiro et al.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14 | <input type="checkbox"/> | US 5422380 A | 19950606   | 18    | Sound absorbing and decoupling syntactic foam           | 521/107    | 521/137;<br>521/159; |             | Mendelsohn; Morris A. et al. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15 | <input type="checkbox"/> | US 5350777 A | 19940927   | 7     | Production and use of open cell rigid polyurethane foam | 521/117    | 521/118;<br>521/124; |             | Yuge; Kiyohiro et al.        | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16 | <input type="checkbox"/> | US 5169875 A | 19921208   | 4     | Urethane composition                                    | 521/155    | 521/163;<br>521/170; |             | Nakamura; Tsutomu et al.     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17 | <input type="checkbox"/> | US 5082868 A | 19920121   | 6     | Method for the preparation                              | 521/114    | 521/116;             |             | Burkhart; Georg et al.       | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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